sub H1

13. (Three Times Amended) A system for ablating tissue within a body comprising

a guide element for introduction into a body,

at least one energy transmitting electrode defining an energy transmitting region on the guide element,

an operator interface operable during an ablation procedure and adapted to receive at least first and second predetermined input commands, and

H1 control means for electronically coupling the region to a source of tissue ablating energy, selectively electronically altering the energy transmitting characteristics of the region to block transmission from portion of the region while allowing transmission from another portion of the region in response to [a] the first input command, and electronically varying the length of the region where transmission is allowed between a first non-zero length and a second non-zero length in response to [a] the second input command.

sub I2

28. (Twice Amended) A system for ablating tissue within a body, comprising:

a guide element for introduction into a body;

a plurality of longitudinally spaced electrodes on the guide element;

an operator interface operable during an ablation procedure and adapted to receive at least a first predetermined input command; and

a controller operably connected to the plurality of electrodes, to the operator interface and to a source of tissue ablating energy, the controller being adapted to receive predetermined input commands from the operator interface and to

H2 electrically connect the plurality of electrodes to the source of tissue ablating energy, the controller including switching means for selectively disconnecting at least one of the electrodes within the plurality of longitudinally spaced electrodes from the source of tissue ablating energy in response to [a] the first predetermined input command such that two electrodes are electrically connected to the source of tissue ablating energy and the at least one disconnected electrode is between the two connected electrodes.

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32. (Amended) A system as claimed in claim 28, wherein the operator interface is adapted to receive a second predetermined input command and the controller further includes polarity means for selectively altering transmission of energy from the electrodes between a unipolar ablation mode and a bipolar ablation mode in response to [a] the second predetermined input command.

33. (Three Times Amended) A system for ablating tissue within a body, comprising:

a guide element,

at least first, second and third contiguous electrodes carried by the guide element arranged such that the second electrode is located between the first and third electrodes,

an operator interface operable during an ablation procedure and adapted to receive at least first and second predetermined input commands,

a control device associated with the operator interface and operable in a first mode in response to [a] the first input command to simultaneously electronically couple the first, second and third electrodes to a source of tissue ablation energy such that the first, second and third electrodes simultaneously transmit ablation energy, and operable in a second mode in response to [a] the second input command to block transmission from one of the first, second and third electrodes while simultaneously electronically coupling the other of the first, second and third electrodes to a source of tissue ablation energy such that the other of the first, second and third electrodes simultaneously transmit ablation energy, and

an indifferent electrode adapted to be located on a patient,

wherein the first, second and third electrodes transmit ablation energy to the indifferent electrode.

41. (Amended) A system according to claim 16, wherein the [control means comprises] operator interface includes an array of manually operable switches respectively associated with the energy transmitting electrodes in the array.

42. (Amended) A system according to claim 16, wherein the [control means comprises] operator interface includes an array of manually operable on-off switches respectively associated with the energy transmitting electrodes in the array.

43. (Amended) A system as claimed in claim 28, wherein the [controller comprises] operator interface includes a plurality of manually operable switches respectively associated with the plurality of electrodes.

44. (Amended) A system as claimed in claim 28, wherein the [controller comprises] operator interface includes a plurality of manually operable on-off switches respectively associated with the plurality of electrodes.

45. (Amended) A system as claimed in claim [28] 32, wherein the [control device comprises] operator interface includes at least first, second and third manually operable switches respectively associated with the first, second and third electrodes.

46. (Amended) A system as claimed in claim [28] 33, wherein the [control device comprises] operator interface includes at least first, second and third manually operable on-off switches respectively associated with the first, second and third electrodes.

REMARKS

I. PRELIMINARY REMARKS

Claims 13, 28, 32, 33 and 41-46 have been amended. No claims have been added or canceled. Claims 13, 16, 17, 19, 20, 28, 30, 32, 33, 35, 36 and 38-46 remain in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

II. BRIEF DESCRIPTION OF THE ILLUSTRATED EMBODIMENTS

The present invention, as defined by the claims, is directed generally to a system for ablating tissue. As shown by way of example in FIGS. 59 and 60, a system 298 in accordance with one embodiment of the invention includes a controller 300 and a probe 180 that may be inserted into the body. The probe includes an ablation element 176(1) which, in the exemplary embodiment, consists of a plurality of conductive regions E1 to E7 that form an energy emitting region 192.

The exemplary controller 300 can be used to selectively switch the operation of the electrodes between unipolar and bipolar ablation modes. The controller 300 also includes ***an input panel 302*** with a plurality of manually operable switches T1 to T7 that can be used to selectively block transmission to some or all of the respective conductive regions E1 to E7 to ***selectively form a variety of lesion patterns and lengths***. [See the specification from, for example, page 53, line 31 to page 58, line 17 and FIGS. 59-66.] Some of these lesion patterns are formed when two conductive regions are separated by a non-conductive region. [See FIGS. 33-35.]

III. PRIOR ART REJECTIONS

A. The Rejections

Claims 13, 16, 19, 20, 28, 30, 33-36, 38 and 39 have been rejected under 35 U.S.C. § 102 as being anticipated by the Eggers '443 patent. Claims 17, 32 and 40-45 have been rejected under 35 U.S.C. § 103 as being unpatentable over the combined teachings of the Eggers '443 and Imran '151 patents. Claims 41-46 have been rejected under 35 U.S.C. § 103 as being unpatentable over the combined teachings of the Eggers '443 and Desai '198 patents. The rejections under 35 U.S.C. §§ 102 and 103 are respectfully traversed with respect to the claims as amended above. Reconsideration thereof is respectfully requested.

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B. The Claimed Inventions

Independent claim 13 calls for a combination of elements including, *inter alia,* at least one energy transmitting electrode defining an energy transmitting region, ***an operator interface operable during an ablation procedure and adapted to receive at least first and second predetermined input commands***, and control means for electronically coupling the region to a source of tissue ablating energy, selectively electronically altering the energy transmitting characteristics of the region to block transmission from portion of the region while allowing transmission from another portion of the region in response to the first input command, and electronically varying the length of the region where transmission is allowed between a first non-zero length and a second non-zero length in response to the second input command.

Independent claim 28 calls for a combination of elements including, *inter alia*, a plurality of longitudinally spaced electrodes, ***an operator interface operable during an ablation procedure and adapted to receive at least a first predetermined input command***, and a controller operably connected to the plurality of electrodes, to the operator interface and to a source of tissue ablating energy, the controller being adapted to ***receive predetermined input commands from the operator interface*** and to electrically connect the plurality of electrodes to the source of tissue ablating energy, the controller including switching means for selectively disconnecting at least one of the electrodes within the plurality of longitudinally spaced electrodes from the source of tissue ablating energy in response to the first predetermined input command such that two electrodes are electrically connected to the source of tissue ablating energy and the at least one disconnected electrode is between the two connected electrodes.

Independent claim 33 calls for a combination of elements including, *inter alia*, at least first, second and third contiguous electrodes, ***an operator interface operable during an ablation procedure and adapted to receive at least first and second predetermined input commands***, and a control device associated with the operator

interface and operable in a first mode in response to the first input command to simultaneously electronically couple the first, second and third electrodes to a source of tissue ablation energy such that the first, second and third electrodes simultaneously transmit ablation energy, and operable in a second mode in response to the second input command to block transmission from one of the first, second and third electrodes while simultaneously electronically coupling the other of the first, second and third electrodes to a source of tissue ablation energy such that the other of the first, second and third electrodes simultaneously transmit ablation energy.

C. Discussion

The Eggers patent is directed to a system that may be used to selectively heat stenotic material within a blood vessel while limiting the amount of heat applied to blood and the blood vessel wall. [Column 4, lines 49-54.] The system includes a catheter 10 with an array of isolated electrodes 18 disposed on the catheter tip 12. The electrodes 18 are connected to a power source 32 with an operator interface that includes voltage and temperature controls. The power source 32 also includes what appears to be a single on-off switch that enables/disables power to all of the electrodes.

In contrast to the presently claimed inventions, the Eggers power source 32 does not block transmission from (or disconnect power to) some of the electrodes during an ablation procedure in response to a command input into the operator interface. The power source 32 instead ***automatically*** blocks power to some of the electrodes 18 when those electrodes are transmitting power through a relatively low resistance path (i.e. blood or blood vessel wall) in order to focus the energy through a relatively high resistance path (i.e. stenotic material). [Column 3, lines 18-28 and column 6, line 57 to column 7, line 17.] Thus, even assuming *arguendo* that the Eggers power source 32 includes an internal controller whose internal operations includes various ***pre-programmed*** commands (as apparently asserted in the Office Action), power to some of the electrodes simply is not blocked based on commands ***input via an operator interface***.

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